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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,209	02/06/2004	Danny R. Hessert	14395 (6365/90775)	6910
44986	7590	08/15/2006		EXAMINER
		Levenfeld Pearlstein, LLC (ILLINOIS TOOL WORKS) 2 North LaSalle Street Suite 1300 CHICAGO, IL 60602		HINZE, LEO T
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 08/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/774,209	HESSERT ET AL.	
	Examiner	Art Unit	
	Leo T. Hinze	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 June 2006.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3-13 and 15 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1,3-13 and 15 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 06 February 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Oath/Declaration

1. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the mailing address of each inventor. A mailing address is an address at which an inventor customarily receives his or her mail and may be either a home or business address. The mailing address should include the ZIP Code designation. The mailing address may be provided in an application data sheet or a supplemental oath or declaration. See 37 CFR 1.63(c) and 37 CFR 1.76.

It does not identify the city and either state or foreign country of residence of each inventor. The residence information may be provided on either an application data sheet or supplemental oath or declaration.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

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person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 5-9 and 11-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann, US 5,419,247 (hereafter Bachmann) in view of Ota et al., US 5,749,293 (hereafter Ota).

a. Regarding claims 1 and 9:

Bachmann teaches an ink supply system for use with a printer of the type in which ink is deposited in a receiving region on a plate (15, Fig. 3a) and ink is scraped from the plate leaving ink in the receiving region, comprising: an ink cup (50, Fig. 3a) having a hollow interior defining an ink reservoir and defining an outer edge, the outer edge having a scraping element (65, Fig. 3a) thereon for engaging the plate, the ink cup having an inlet and an outlet; a pump (56, Fig. 3a) having a suction side and a discharge side, the suction side being in flow communication with the ink cup outlet for drawing ink from the cup; a viscosity sensor ("well-known arrangement to monitor the viscosity and the temperature," col. 4, ll. 58-59); a reservoir (50, Fig. 3a) a flow conduit (58, Fig. 3a) extending between the reservoir and the ink cup for providing a flow of ink

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from the reservoir to the ink cup, wherein the pump draws ink from the cup creating a negative pressure within the cup and wherein the negative pressure within the cup draws ink from the reservoir to the ink cup through the flow conduit; a second flow conduit extending between the reservoir and the ink cup outlet for providing a flow of ink from the ink cup to the viscosity controller (57, Fig. 3a); means for creating a less than atmospheric pressure in the ink cup (56, Fig. 3a) disposed in the second flow conduit. Bachmann also teaches that it is desirable to prevent an overpressure condition in the ink cup (9, Fig. 1; col. 2, ll. 56-58).

Bachmann does not teach a viscosity controller in flow communication with the pump discharge and configured to receive ink from the pump; wherein the ink cup is at an elevation and wherein the viscosity controller is at an elevation that is lower than the elevation of the ink cup. Bachman is also silent as to the exact spatial relationship of the elevations of the ink cup and the ink reservoir.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Bachmann such that the ink reservoir and pump were below the ink cup, because a person having ordinary skill in the art would recognize, by taking advantage of well-known hydraulic principles (i.e. that water runs downhill), that placing the reservoir of ink below the ink cup would reduce the possibility of over-pressuring the ink cup due to a static head difference in pressures between the reservoir and the ink cup.

Ota teaches an ink delivery system including a reservoir (9, Fig. 1), a pump (10, Fig. 1) filter (11, Fig. 1), a viscosity/temperature controller (12, Fig. 1), and an ink supply (P1, Fig. 1).

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Bachmann to include a viscosity controller downstream from the pump and upstream from the ink supply, because a person having ordinary skill in the art would recognize that a viscosity controller would increase the functionality of the Bachmann machine by allowing automatic adjustments of ink viscosity based on the output from the well-known viscosity sensor of Bachmann.

- b. Regarding claims 5, 6 and 12, the combination of Bachmann and Ota teaches all that is claimed as discussed in the rejection of claims 1 and 9 above. Bachmann also teaches wherein the first flow conduit (58, Fig. 3a) is a passive flow conduit.
- c. Regarding claims 7 and 13, the combination of Bachmann and Ota teaches all that is claimed as discussed in the rejection of claims 1 and 9 above. Bachmann also teaches wherein the scraping element (65, Fig. 3a) is a doctor blade.
- d. Regarding claims 8 and 11, the combination of Bachmann and Ota teaches all that is claimed as discussed in the rejection of claims 1 and 9 above. Bachmann also teaches a viscosity measuring device (“well-known arrangement to monitor the viscosity and the temperature,” col. 4, ll. 58-59).
- e. Regarding claim 15, the combination of Bachmann and Ota teaches all that is claimed as discussed in the rejection of claim 9 above. Bachmann also teaches wherein the means for creating a less than atmospheric pressure is a pump (56, Fig. 3a) disposed between the ink cup and the viscosity controller and wherein the pump take suction from the ink cup.

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5. Claims 3, 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachmann in view of Ota as applied to claims 1 and 9 above, and further in view of Gaenzle, US 4,792,292 (hereafter Gaenzle).

The combination of Bachmann and Ota teaches all that is claimed as discussed in the rejections of claims 1 and 9 above. Ota is silent as to the specific workings of the viscosity controller 12 (Fig. 1).

The combination of Bachmann and Ota does not teach:

Claim 3: an ink thinner supply, the ink thinner supply being in flow communication with the viscosity controller;

Claim 4: wherein when the viscosity controller senses a higher than desired viscosity of the ink, a quantity of the ink thinner is provided to the viscosity controller to mix with the ink reduce the ink viscosity;

Claim 10: an ink thinner supply in flow communication with the viscosity controller, and wherein when the viscosity controller senses a higher than desired viscosity of the ink, a quantity of ink thinner is provided to the viscosity controller to mix with the ink to thin the ink.

Gaenzle teaches an ink pump system (10, Fig. 1) including a viscosity controller with an ink thinner supply ("solvent reservoir," col. 1, l. 44) in flow communication with the viscosity controller, and wherein when the viscosity controller senses a higher than desired viscosity of the ink, a quantity of ink thinner is provided to the viscosity controller to mix with the ink to thin the ink ("transferring solvent from the solvent reservoir to the ink reservoir as required to maintain

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the ink's viscosity," col. 1, ll. 46-47). Gaenzle teaches that it is desirable to maintain the ink used in a system in a substantially uniform viscosity (col. 1, ll. 13-15).

Regarding claims 3, 4 and 10, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify Bachmann to include an ink thinner supply in flow communication with the viscosity controller, and wherein when the viscosity controller senses a higher than desired viscosity of the ink, a quantity of ink thinner is provided to the viscosity controller to mix with the ink to thin the ink, because Gaenzle teaches that this system effectively maintains the viscosity of the ink and that it is desirable to maintain the ink used in a system in a substantially uniform viscosity.

Response to Arguments

6. Applicant's arguments filed 02 June 2006 have been fully considered but they are not persuasive.

a. Applicant argues on p. 7 that neither Bachmann nor Ota discloses an arrangement in which a pump draws ink from the cup and creates a negative pressure in the cup. Bachmann does teach an arrangement in which a pump draws ink from the cup and creates a negative pressure in the cup. Fig. 3a of Bachmann shows a schematic in which the suction side of pump 56 is connected to the ink cup 50. This means that the pump draws ink from the cup and creates a negative pressure in the cup.

b. Applicant argues on p. 7 that nothing in Bachmann suggests the relative elevations of the ink cup and the reservoir. The examiner agrees that Bachmann does not appear to discuss the relative elevations of the ink cup and the reservoir. Despite the explicit teaching of the relative

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elevation of the reservoir and ink cup, there must be some relationship between the elevation of the ink cup and the reservoir. Based on the teaching in Bachmann that it is desirable to prevent an overpressure condition in the ink cup (9, Fig. 1; col. 2, ll. 56-58), a person having ordinary skill (including knowledge of hydraulic principles) in the art, would recognize that one way to prevent an overpressure condition in ink cup 50 (Fig. 3a) would be to place the reservoir of fluid below the level of the ink cup. This would mean that in the event of uncontrolled movement of ink between the ink cup and the reservoir, such movement would be in the direction of the reservoir, as liquid flows downhill, thereby preventing overpressure in the ink cup.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**REN YAN
PRIMARY EXAMINER**

Leo T. Hinze
Patent Examiner
AU 2854
07 August 2006